

REMARKS

The Title has been changed, as suggested by the Examiner, such that it is now more descriptive of the claimed invention.

The claims have been amended to more clearly define the invention as disclosed in the written description. In particular, claims 2, 3, 6 and 11-16 have been cancelled. In addition, claims 1, 4, 5 and 7-10 have been amended for clarity.

The Examiner has rejected claims 1-8, 10, 12 and 14-16 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,978,689 to Tuoriniemi et al. The Examiner has further rejected claims 9 and 13 under 35 U.S.C. 103(a) as being unpatentable over Tuoriniemi et al. in view of International Patent Application No. WO 01/19054 to Baranowski et al. Finally, the Examiner has rejected claim 11 under 35 U.S.C. 103(a) as being unpatentable over Tuoriniemi et al. in view of U.S. Patent 6,571,103 to Novakov.

The Tuoriniemi et al. patent discloses a personal portable communication and audio system including a headset having a microphone 16 coupled to the end of a boom arm 14, a headband having a first end at which the boom arm 14 is coupled to a rotational switch 12, a first loudspeaker 18 also arranged at the first end of the head band, and a second loudspeaker 20 arranged at a second end of the headband. The system also includes a communications audio set (telephone) which is connected to the headset via a connector 28 and corresponding plug 26 on a lead wire from the headset. In

addition, digital audio device 70 is connectable through the telephone to the headset via a connecting cable 80 plugging into a connector 78 on the telephone 22. As shown in Fig. 2, the switch 12 alternatively connects the microphone 16 or the loudspeaker 20 to one of the signal lines in the lead wire, the other loudspeaker 18 being connected to the other signal wire. As shown in Fig. 3, an off-hook detect circuit 42 detects whether the switch 12 connects the microphone 16 or the loudspeaker 20 to the signal wire, and if the loudspeaker 20, causes the microcontroller 49 to cause switch 38 to connect the loudspeaker 18 to one terminal of the digital audio device 70, and the switch 40 to connect the loudspeaker 18 to the other terminal of the digital audio device 70. If the microphone is connected by the switch 12, the off-hook detect circuit 42 causes the microcontroller 49 to cause switch 38 to connect the loudspeaker 18 to the telephone receiver 60, the switch 40 to connect the telephone transmitter 58 to the microphone 20.

The subject invention concerns a headset for connection to an electronic device, e.g., a cellphone or an audio device (e.g., MP3 player). As claimed in claim 1, the headset includes a first unit comprising a sound transducer, a first interface for receiving a first input signal, and a first processor for processing the first input signal to generate a first audio signal in a first operational mode for application to the first sound transducer. In the first operational mode, the headset may be connected to a

cellphone and the monaural signal therefrom constitutes the first input signal and is applied as the first audio signal to the first sound transducer. However, in a second operational mode, the headset may be connected to, for example, an MP3 player. To that end, the headset includes a second unit connectable to the first unit and comprising a second interface for receiving a second input signal, a second processor for processing this second input signal to generate a second audio signal and a third audio signal. The third audio signal is applied to a second sound transducer in the second unit, while the second audio signal is supplied back to the first unit for application to the first sound transducer. As such, the second processor decodes the encoded audio signal from the MP3 player and provides, for example, the right channel of stereo signals to the second transducer and the left channel of stereo signals to the first unit for application to the first sound transducer.

Applicants submit that Tuoriniemi et al. neither shows nor suggests that each unit of the headset should include a processor for processing input signals. Rather, Tuoriniemi et al. discloses a headset having no processors, the processing being performed in the mobile telephone to which the headset is connected. As such, if the headset of Tuoriniemi et al. were to be directly connected to the audio device, then the processing ability that is derived in the mobile telephone is lost.

Further, Tuoriniemi et al. neither discloses or suggests that, in the second operational mode, the second processor processes the second input signal into a second and third audio signal, applies the third audio signal to the second sound transducer in the second unit, and applies the second audio signal to the first unit for application to the first sound transducer.

The Baranowski et al. reference discloses integrated headphones for audio programming and wireless communications with a biased microphone boom and method of implementing same, which arguably discloses wireless communications with a mobile phone. However, Applicants submit that Baranowski et al. fails to supply that which is missing from Tuoriniemi et al., i.e., providing each unit of the headset with a processor for processing input signals, and that, in the second operational mode, the second processor processes the second input signal into a second and third audio signal, applies the third audio signal to the second sound transducer in the second unit, and applies the second audio signal to the first unit for application to the first sound transducer.

In view of the above, Applicants believe that the subject invention, as claimed, is neither anticipated nor rendered obvious by the prior art, either individually or collectively, and as such, is patentable thereover.